

LAND APPLICATION OF BIOSOLIDS WILLIAM DAVIS CARLTON

KQ31 (FIELDS 1 – 3, 5 – 8) KING & QUEEN COUNTY, VIRGINIA JUNE 2012



June 29, 2012

Mr. Scott Healey Department of Environmental Quality Piedmont Regional Office 4949-A Cox Road Glen Allen, VA 23060

Dear Mr. Healey,

Transmitted herein for your consideration is land application site for William Davis.Carlton,. (designated as KQ 31, fields 1-3 & 5-8), located in King & Queen County, Virginia. This submission contains strictly site specific information. Please refer to the operations and maintenance manual submitted under separate cover for all non-site specific information.

Do not hesitate to contact me at (804) 443-2170 should you have any questions or require additional information.

Sincerely,

Chris Sylva

Technical Services Manager



FIELD SUMMARY SHEET

William Davis Carlton KQ31

SYNAGRO FIELD #			FSA TRACT #	FSA FIELD #	TOPO QUAD	OWNER
31-01	117.6	117.2	186		Shacklefords	William Davis Carlton
31-02	38.0	36.5	436		Truhart	William Davis Carlton
31-03	39.5	39.5	614		Truhart	William Davis Carlton
31-05	48.3	47.6	256		West Point	W. R. Norman
31-06	4.0	3.9	256		West Point	W. R. Norman
31-07	22.9	21.7	432		Truhart	Florence S. Morris Estate
31-08	12.5	12.5	505		Truhart	Florence S. Morris Estate
TOTALS:	282.8	278.9				

VIRGINIA POLLUTION ABATEMENT APPLICATION FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APPLICATION AGREEMENT- BIOSOLIDS AND INDUSTRIAL RESIDUALS

agreement remains in eff	referred to here as "Landowr ect until it is terminated in writ parcels identified in this agree	greement is made on	here as the "Permittee". This nership of all parcels changes.		
l andowner:			, located in, d on the tax map(s) attached		
Table 1.: Parcels auti	norized to receive biosolids, w	rater treatment residuals or of	ther industrial sludges		
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID		
☐ Additional parcels containing Lan	d Application Sites are identified on S	Supplement A (check if applicable)			
Check one: A lar	n the sole owner of the prope		n.		
In the event that I, the lando within 38 months of the lates 1. Notify the purchaser closing date; and	wner, sell or transfer all or pa	rt of the property to which bid , I shall: ess and crop management re	osolids have been applied		
I have no other agreements	I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this				
I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance. Class B biosolids Water treatment residuals Food processing waste Other industrial sludges X Yes No					
Permittee:	(MATAPO	ng Address UA. 23110		
Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification. Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.					
Chris sylva	Chi M		dewater Trail in, VA 22438		
Permittee- Authorized Representa Printed Name	tive Signature \		Address		

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VIRGINIA POLLUTION ABATEMENT APPLICATION PART D-VILAND APPLICATION AGREEMENT

Page 2 of 2

	Permit # or County:
Landowner:	Farm Name or Address:

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

- 1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
- 2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
- Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
- 4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

- a. Meat producing livestock shall not be grazed for 30 days,
- b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
- Other animals shall be restricted from grazing for 30 days;
- 5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia:
- 6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Landowner's Signature	Date
Rev 10/03/2011	

VIRGINIA POLLUTION ABATEMENT APPLICATION FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APPLICATION AGREEMENT- BIOSOLIDS AND INDUSTRIAL RESIDUALS

agreement remains in eff	I residuals land application ag referred to here as "Landown ect until it is terminated in writ parcels identified in this agree authorized to receive biosoli	er", and Synagro referred to ing by either party or until ow ement changes, those parcels	here as the "Permittee". This nership of all parcels changes.		
I was discounted	of real property known as <u>f</u> e agricultural sites identified b				
Table 1.: Parcels auti	norized to receive biosolids, w	rater treatment residuals or ot	her industrial sludges		
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID		
☐ Additional parcels containing Lan	d Application Sites are identified on S	Supplement A (check if applicable)			
Check one: ☐ I ar	n the sole owner of the prope m one of multiple owners of t	rties identified herein. he properties identified hereir	n		
In the event that I, the lando within 38 months of the lates 1. Notify the purchaser closing date; and	wner, sell or transfer all or pa st date of biosolids application of the applicable public acce der of the sale within two wee	rt of the property to which bid , I shall: ess and crop management re	osolids have been applied		
I have no other agreements		lds identified herein. I will not	ify the permittee immediately plication or any part of this		
above, before, during or after Class B biosolids Water X Yes □ No X Yes					
William C. Mornis J. Landowner- Printed Name	rustee William C. Mo Signature	rio, Trate 1036 De. Mailin Little	vils Three Jump Road		
Permittee:		Lille	regressive out so if		
management plan prepared §10.1-104.2 of the Code of \ land application has commer	es to apply biosolids and/or in it Regulation and in amounts for each land application field /irginia. Permittee will provide nced. If the plan requires mod d plan will be provided within	not to exceed the rates identi by a person certified in acco a copy of the NMP to the la ification to reflect the actual a	fied in the nutrient rdance with		
Permittee agrees to notify lan specifically prior to any partic applied.	ndowner or landowner design cular application to landowner'	ee of the proposed schedule s land. Notice shall include t	for land application and he source of residuals to be		
Chris Sylva	Crish		dewater Trail in, VA 22438		
Permittee- Authorized ^l Representa Printed Name	tive Signature \(\)	Mailing	Address		

VIRGINIA POLLUTION ABATEMENT APPLICATION PART D-VILAND APPLICATION AGREEMENT

Permittee: Synagro Central, LLC Landowner:	Permit # or County: Farm Name or Address:
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Landowner Site Management Requirements:

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I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

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William C. Morris Junter	Lune	22, 2012
Landowner's Signature Rev 10/03/2011	U	Date

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Notify the purchaser closing date; and	wner, sell or transfer all or par it date of biosolids application of the applicable public acces der of the sale within two wee	, I shall: ss and crop management res		
I have no other agreements:	for land application on the fiel at the fields are no longer avai	de identified boroin I will soul	ify the permittee immediately dication or any part of this	
above, before, during or after Class B biosolids Water	treatment residuals Food No X Y William and lay the	or DEQ staff to conduct insperse of residuals for the purpose of of the processing waste to the	ections on my land identified determining compliance. er industrial sludges	
Permittee:	Signature		Address 13091	
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Ouris Sylva	Oil		lewater Trail n, VA 22438	

Rev 10/03/2011

Permittee- Authorized Representative

Printed Name

Mailing Address

VIRGINIA POLLUTION ABATEMENT APPLICATION PART D-VILAND APPLICATION AGREEMENT

Page 2 of 2

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Rev 10/03/2011

Tax ID Landowner Identification Sheet

Landowner	Field #	Tax ID
William Davis Carlton	31-01	
William Davis Carlton	31-02	
William Davis Carlton	31-03	
W. R. Norman	31-05	
W. R. Norman	31-06	
Florence S. Morris Estate	31-07	
Florence S. Morris Estate	31-08	
William Davis Carlton William Davis Carlton W. R. Norman W. R. Norman Florence S. Morris Estate	31-02 31-03 31-05 31-06 31-07	

Field #	Latitude (north)	Longitude (west)
31-01	37 ^o 32' 27.51"	76 ^o 43' 00.49"
31-02	37 ^o 37' 51.00"	76° 48' 46.41"
31-03	37 ^o 40' 44.90"	76 ^o 52' 06.84"
31-05	37 ^o 34' 39.61"	76 ^o 46' 37.58"
31-06	37 ^O 34' 49.37"	76 ^o 46' 19.57"
31-07	37 ^o 38' 20.48"	76° 47' 21.36"
31-08	37 ^o 43' 05.91"	76 ^o 45' 48.57"

Farm Summary Report

Fall, 2008 - Fall, 2009 New Plan Dan:

New Farm King & Queen Kelly Love Farm Name: Location:

Specialist:

N-based Acres: 278.9 P-based Acres: 0.0

186 Tract Name: FSA Number:

King & Queen Location:

31-1

117.60 Usable Acres: 117.20 Field Name: Total Acres: FSA Number:

186 Location: Tract:

C King & Queen Hydrologic Group: Ω

Slope Class:

Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

۵ Soil Test Results:
DATE PH
[NO TEST]

Lab

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Soils:

SOIL SERIES SYMBOL PERCENT 5 20 45

Slagle Emporia Slagle Emporia 15B 5D 4A

Emporia 30

Field Warnings:

Tract Name:

436 FSA Number:

King & Queen Location:

31-2 Field Name:

36.50 38.00 Usable Acres: Total Acres:

FSA Number:

436 Tract:

S King & Queen Hydrologic Group: O Location: Slope Class:

Riparian buffer width: 0 ft

Distance to stream: 500 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

 \leq ۵. Soil Test Results:
DATE PH
[NO TEST]

Lab

Soils:

SOIL SERIES SYMBOL PERCENT 9898

Emporia Emporia 48 4A 5E 15C

Emporia Slagle

Slagle

Field Warnings:

014 Tract Name:

FSA Number: Location:

King & Queen

31-3 Field Name: Total Acres:

39.50 Usable Acres: 39.50

FSA Number:

614 Tract:

King & Queen Location:

Hydrologic Group: m Slope Class:

O

Riparian buffer width: 0 ft

Distance to stream: 500 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results: DATE

× 0 PH [NO TEST]

SOIL SERIES SYMBOL PERCENT 75 20 5 Soils:

Emporia Emporia 48 4A 5D

Emporia Slagle

Field Warnings:

2345 0 Tract Name: FSA Number:

King & Queen Location:

T-256

Tract Name: FSA Number: Location:

King & Queen

31-5

48.30 Usable Acres: 47.60 Field Name: Total Acres: FSA Number:

Lab

T-256 Tract:

Location:

King & Queen Hydrologic Group: Slope Class:

O

O

Riparian buffer width: 0 ft Distance to stream: 0 ft

P-Index Summary

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

 \leq ۵. Soil Test Results: DATE PH [NO TEST]

Lab

Soils:

SOIL SERIES Emporia Slagle Emporia Slagle Emporia Tetotum Wahee State1 Slagle SYMBOL 21A 19B 16B 15B 5E 5D 4B PERCENT 10 5 5 20 35 10

Field Warnings:

Field Name: Total Acres:

31-6 Usable Acres: 3.90 4.00

FSA Number: Tract:

T-256 Location:

King & Queen Hydrologic Group: Ω Slope Class:

O

Riparian buffer width: 0 ft Distance to stream: 0 ft

P-Index Summary N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

۵ Soil Test Results:
DATE PH
[NO TEST]

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Lab

Soils:

SOIL SERIES SYMBOL PERCENT 292

Emporia 15B 4B 19B

Tetotum

Field Warnings:

T-432 Tract Name: FSA Number:

Location:

King & Queen

31-7 Field Name: Total Acres:

22.90 Usable Acres: 21.70

0 T-432 FSA Number:

Tract:

Location: Slope Class:

King & Queen Hydrologic Group: 8

C

Riparian buffer width: 0 ft Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results: DATE PH [NO TEST]

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 \checkmark

Lab

Soils:

SOIL SERIES SYMBOL

Emporia Emporia 4 4 A 4 A PERCENT 30 50 20

Emporia

Field Warnings:

T-505 0

Tract Name: FSA Number:

King & Queen Location:

ა გ Field Name:

12.50 Usable Acres: 12.50

0 T-505 Total Acres: FSA Number:

Tract:

King & Queen Hydrologic Group:

 \mathbf{m} Location: Slope Class:

O

Riparian buffer width: 0 ft

Distance to stream: 0 ft

P-Index Summary N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

۵ Soil Test Results:
DATE PH
[NO TEST]

Soils:

SOIL SERIES SYMBOL PERCENT 60 30 10

Emporia 4B 15B 15A

Slagle Slagle

Field Warnings:

Lab

¥

Tract Name: T-2344
FSA Number: 0
Location: K

King & Queen

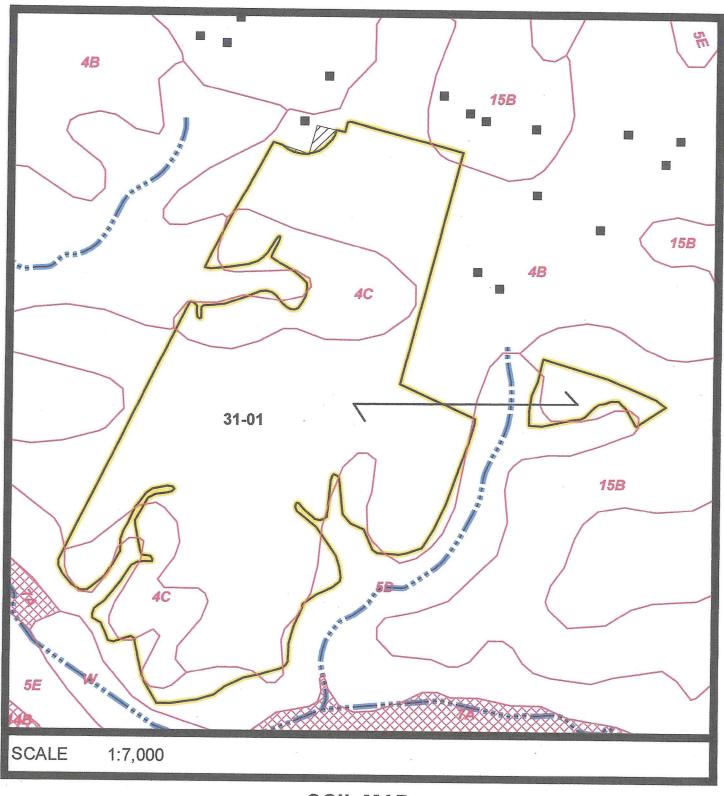
Environmentally Sensitive Areas

Field	Reason for Sensitive Area		
31-01	None		
31-02	None		
31-03	None		
31-05	None		
31-06	None		
31-07	None		
31-08	None		

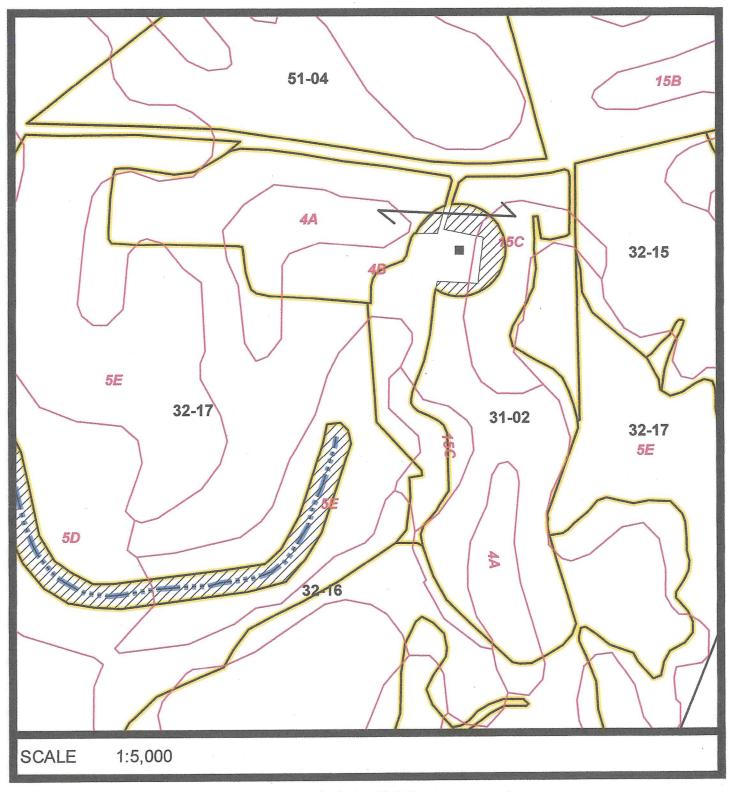
King & Queen County Soils that are Environmentally Sensitive

Soil Map Unit	Series Name	Time of year		Environmental
		High Water	Flooded	
1A	Augusta	Dec - May		THE WAS IN THE TOTAL OF THE TANK AND ADMINISTRATION OF THE TOTAL PROPERTY OF THE TOTAL P
2A, 2B	Bojac			Leaching
7A	Kinston	Nov - June	Nov - June	3
8A	Levy	Jan - Dec	Jan - Dec	Drainage
12A	Rappahannock	Jan – Dec	Jan – Dec	Drainage
13A	Roanoke	Nov - May		
14B, 14C	Rumford	· · · · · · · · · · · · · · · · · · ·		Leaching
18B	Tarboro			Leaching
20A	Tomotley	Nov - April		
21A	Wahee	Dec - March		

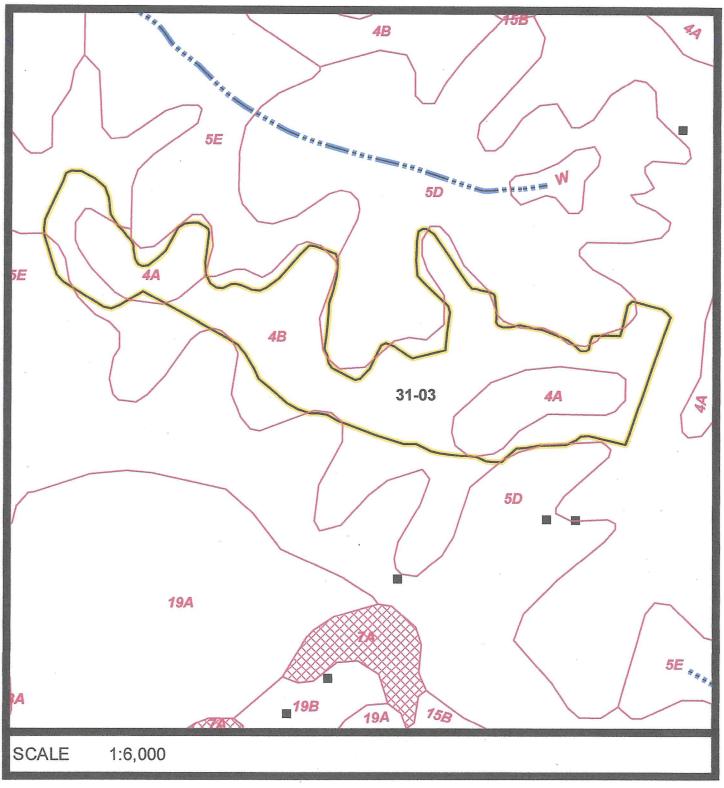
William Davis Carlton KQ31 Field 1



William Davis Carlton KQ31 Field 2

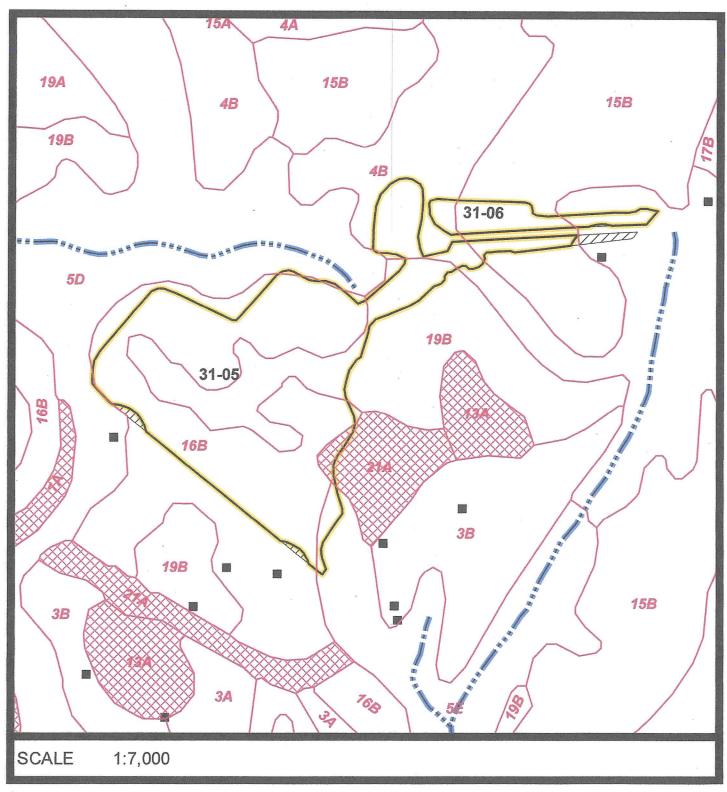


William Davis Carlton **KQ31** Field 3

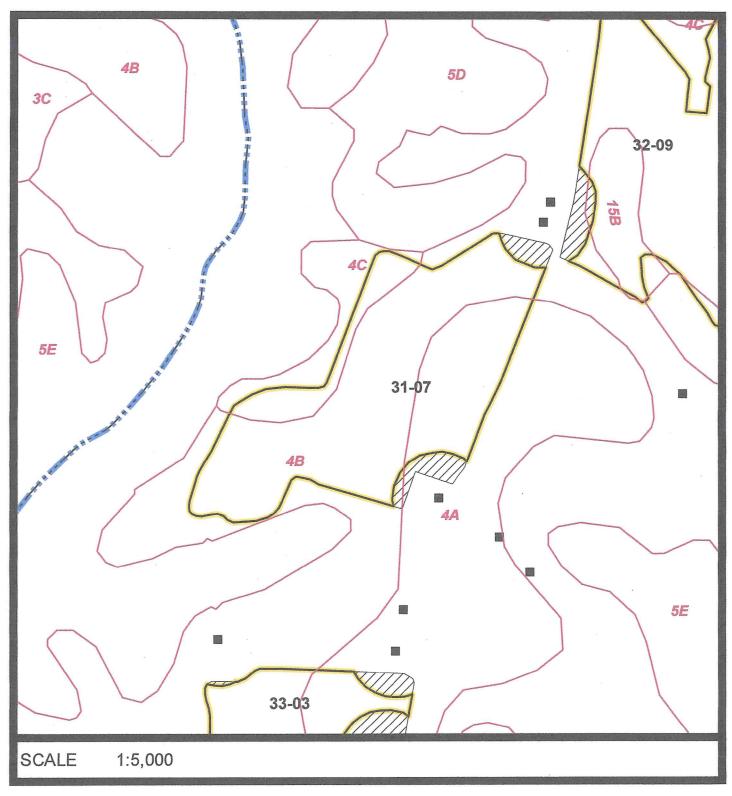


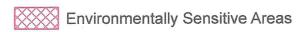


William Davis Carlton KQ31 Fields 5, 6



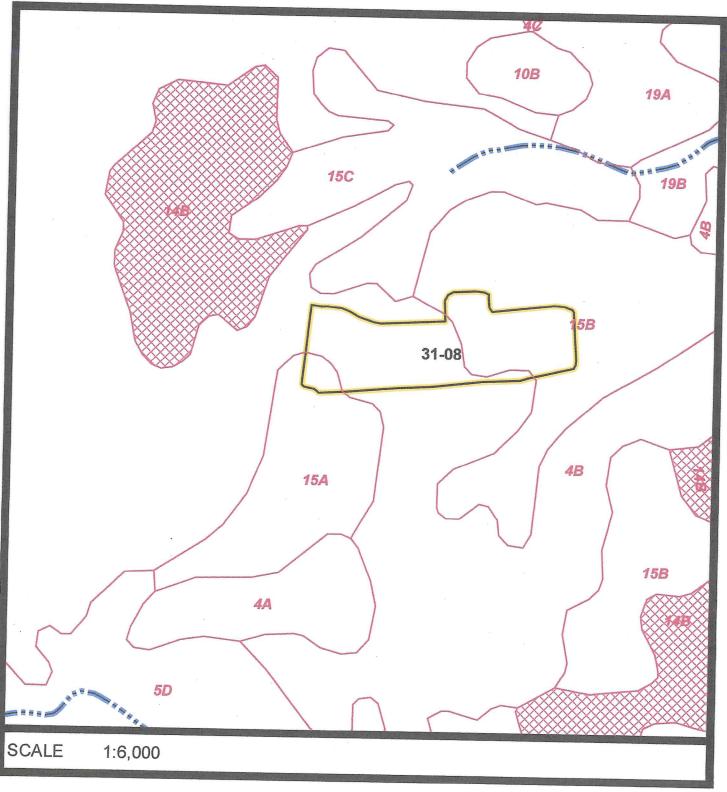
William Davis Carlton KQ31 Field 7

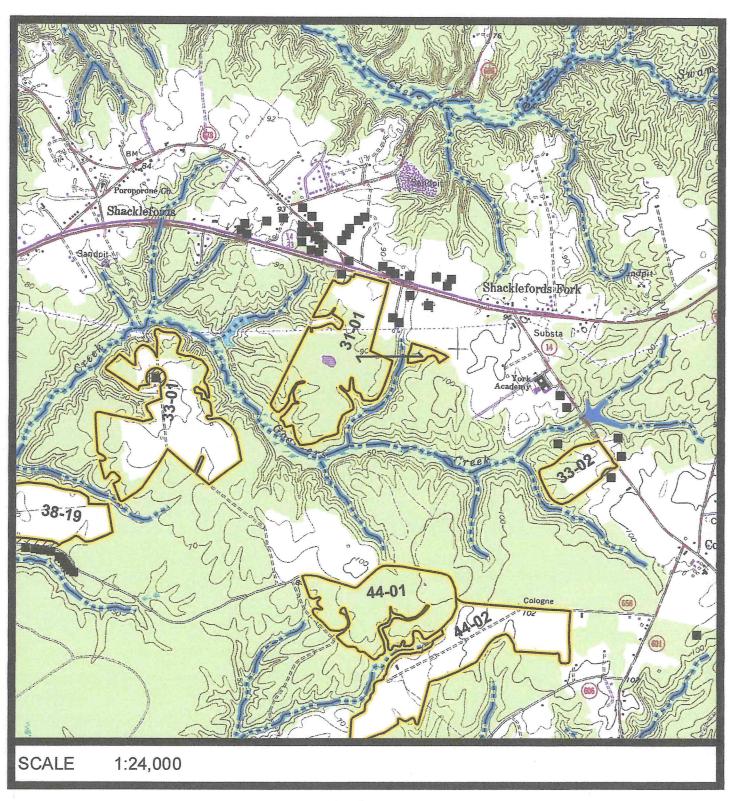






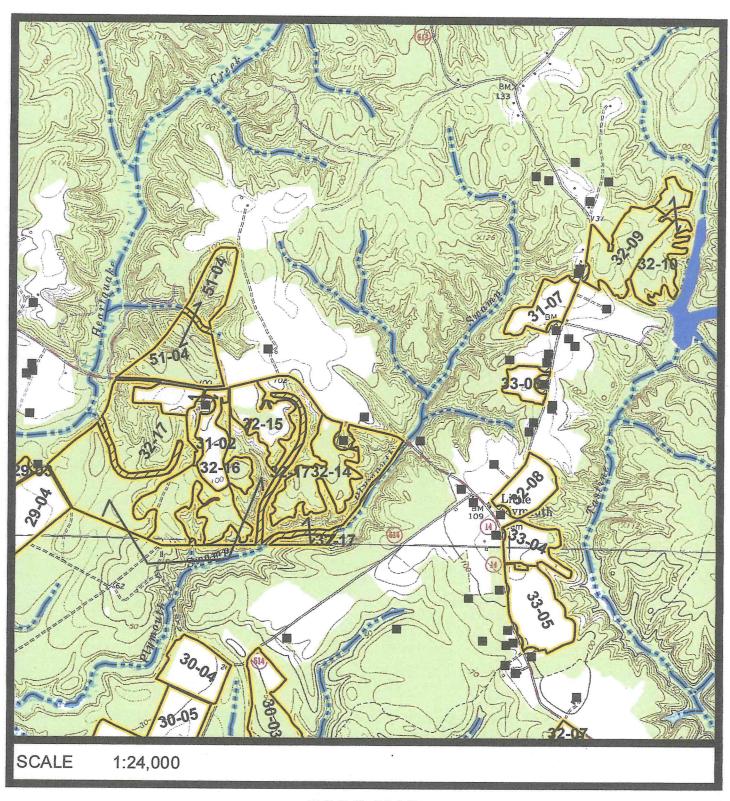
William Davis Carlton KQ31 Field 8



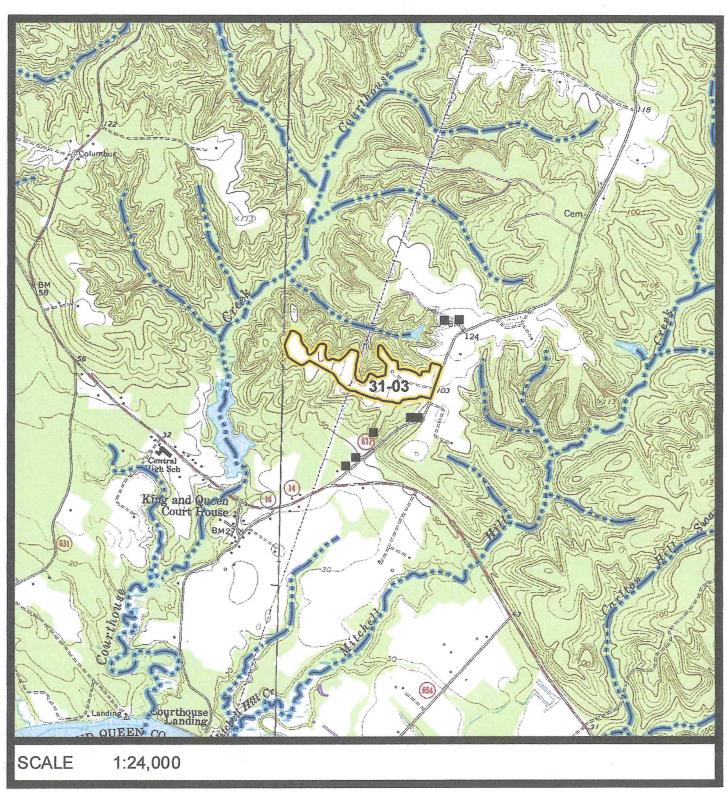


TOPO MAP

William Davis Carlton KQ31 Fields 2, 7

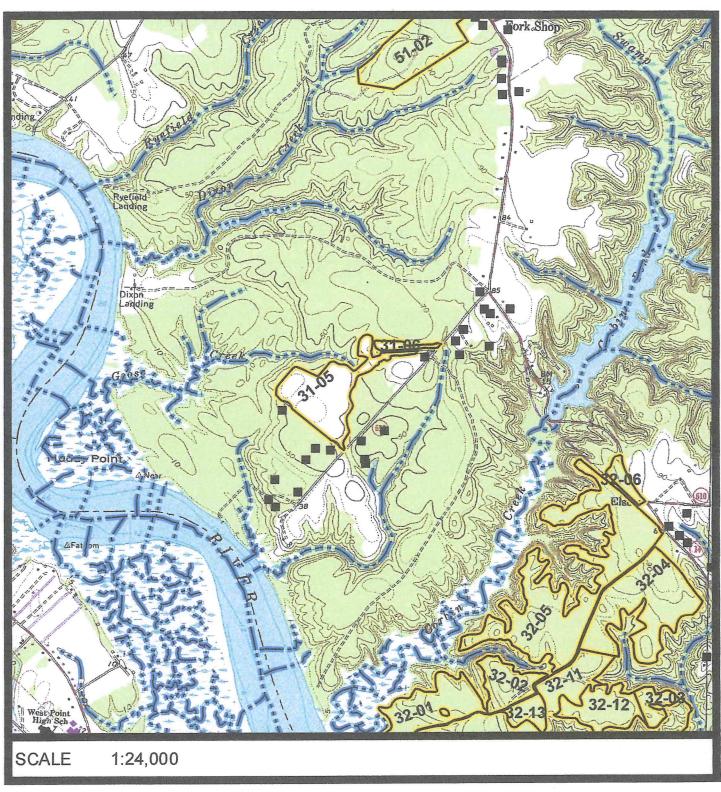


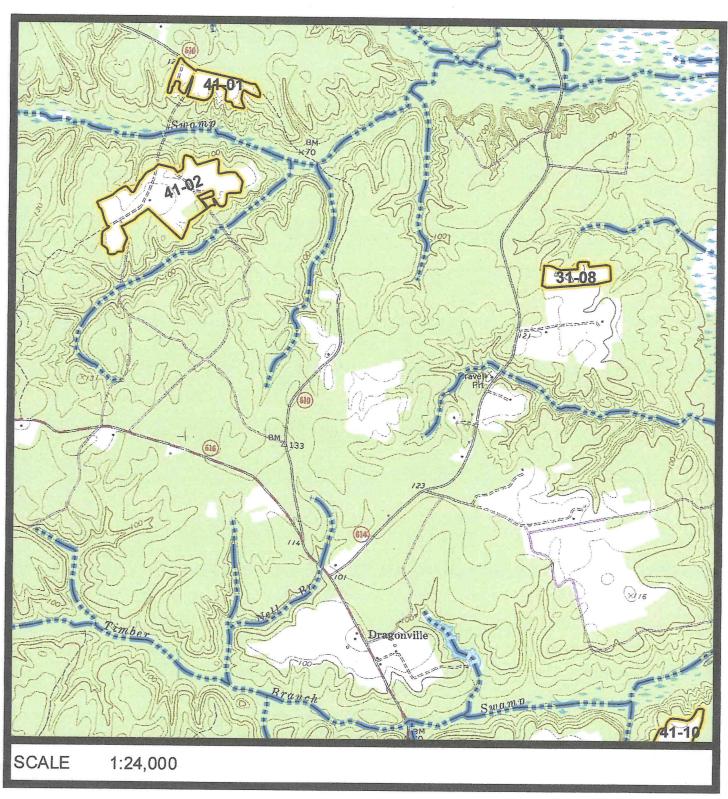
TOPO MAP



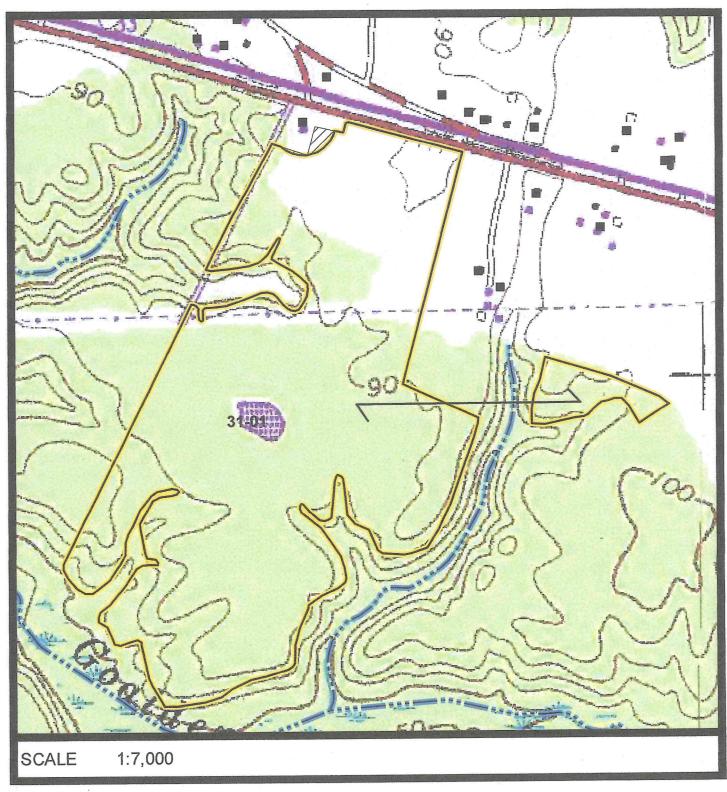
TOPO MAP

William Davis Carlton KQ31 Fields 5, 6



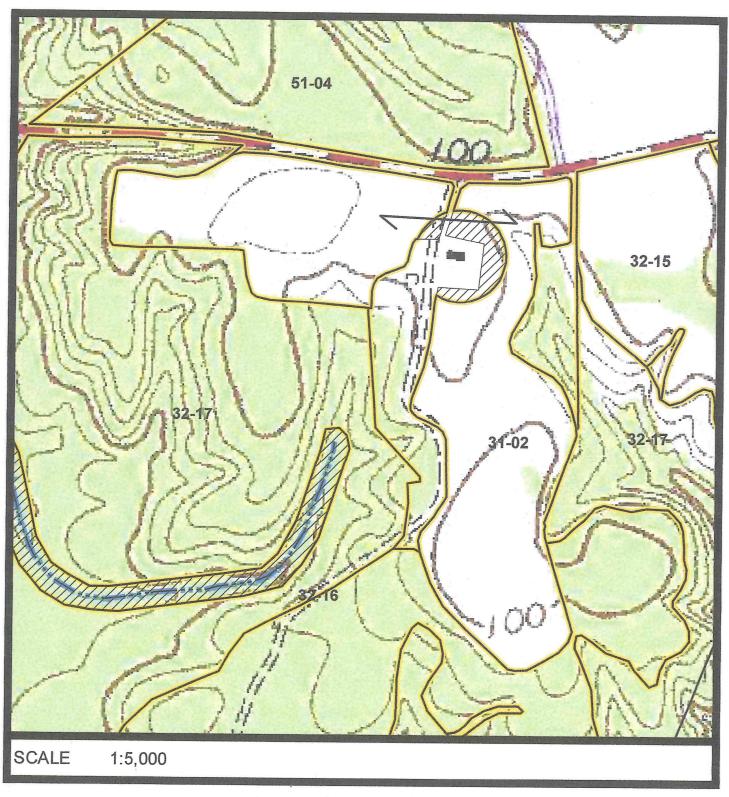


TOPO MAP



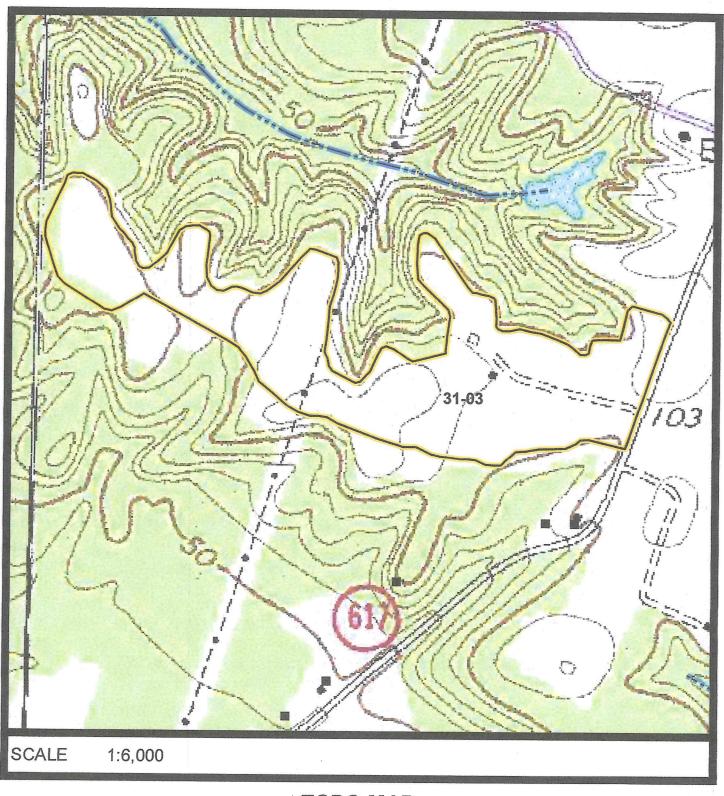
TOPO MAP

William Davis Carlton KQ31 Field 2



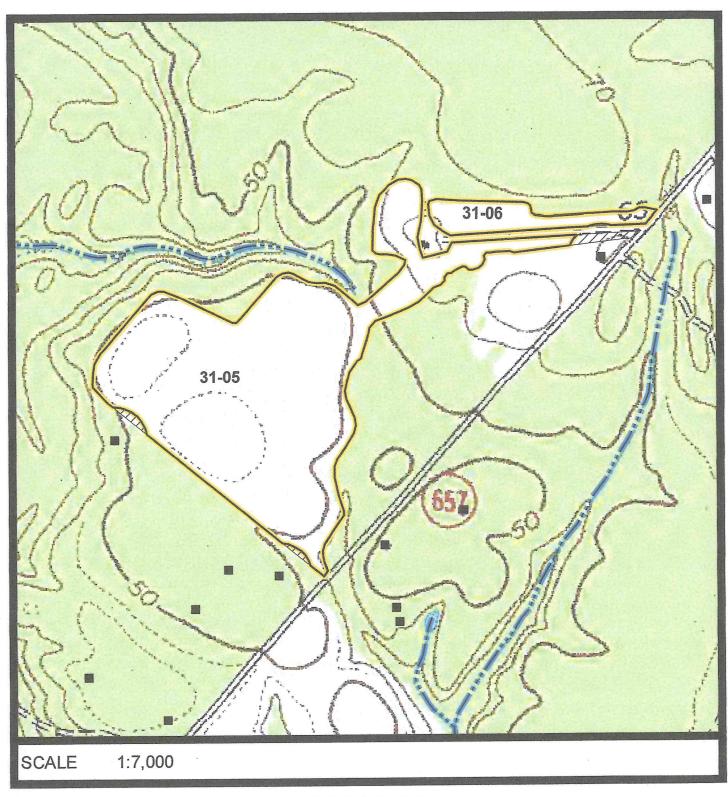
TOPO MAP

William Davis Carlton KQ31 Field 3



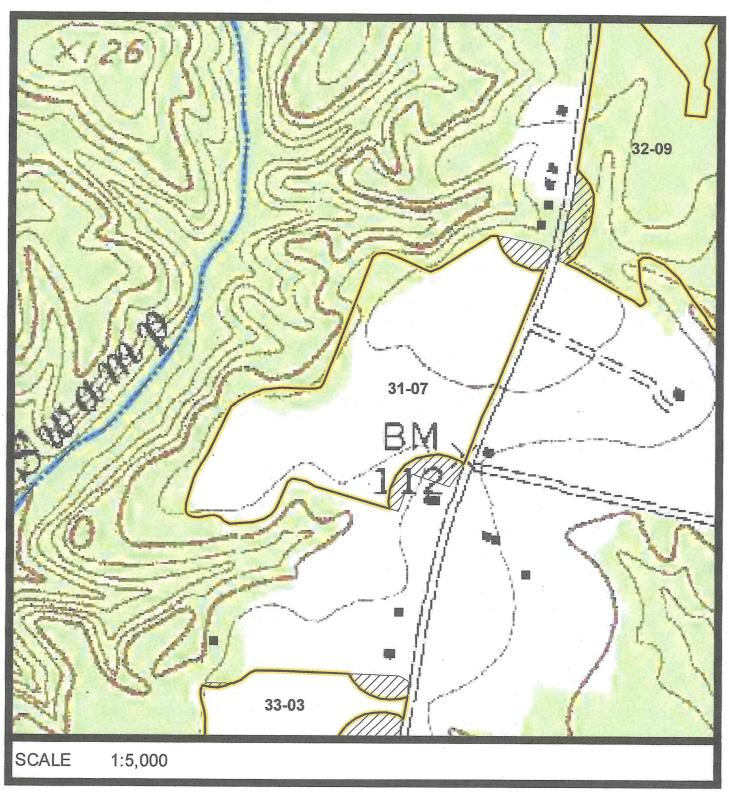
TOPO MAP

William Davis Carlton KQ31 Fields 5, 6



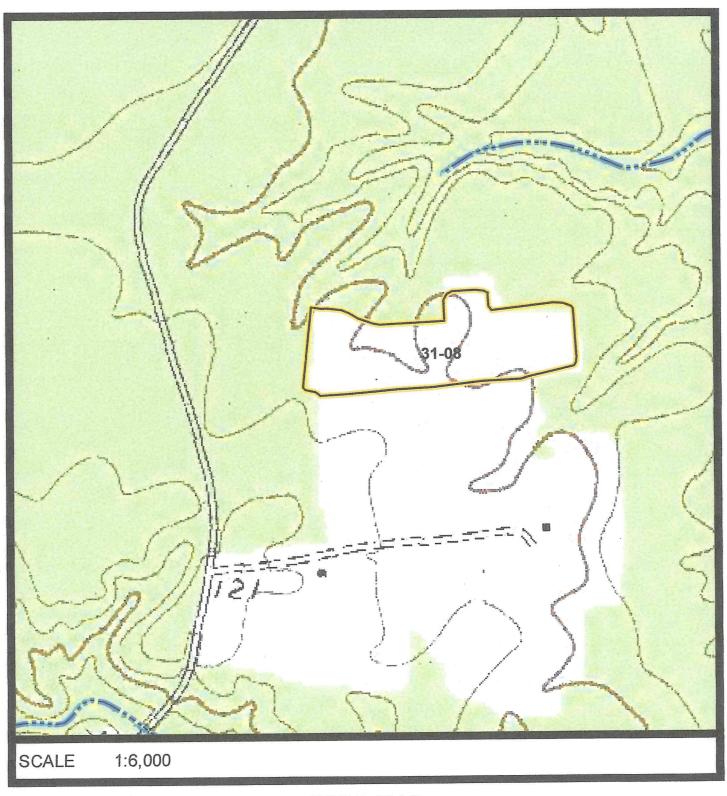
TOPO MAP

William Davis Carlton KQ31 Field 7



TOPO MAP

William Davis Carlton KQ31 Field 8



TOPO MAP

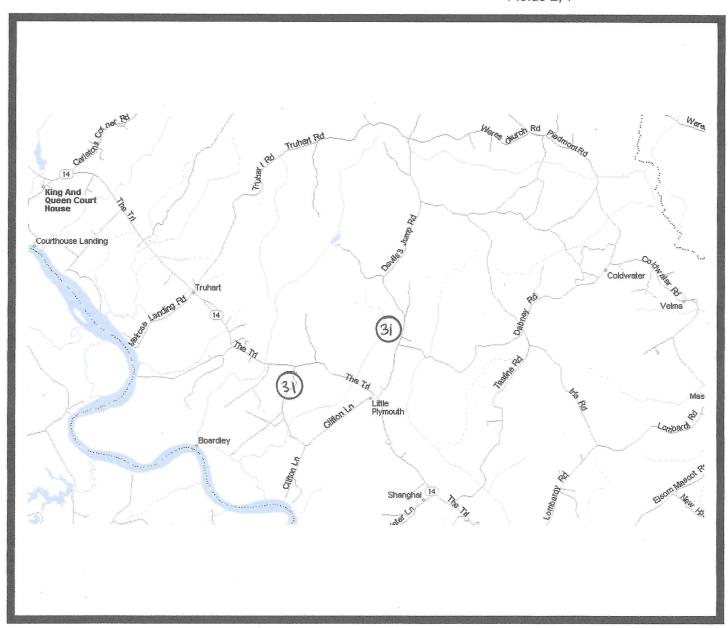


William Davis Carlton KQ31 Field 1



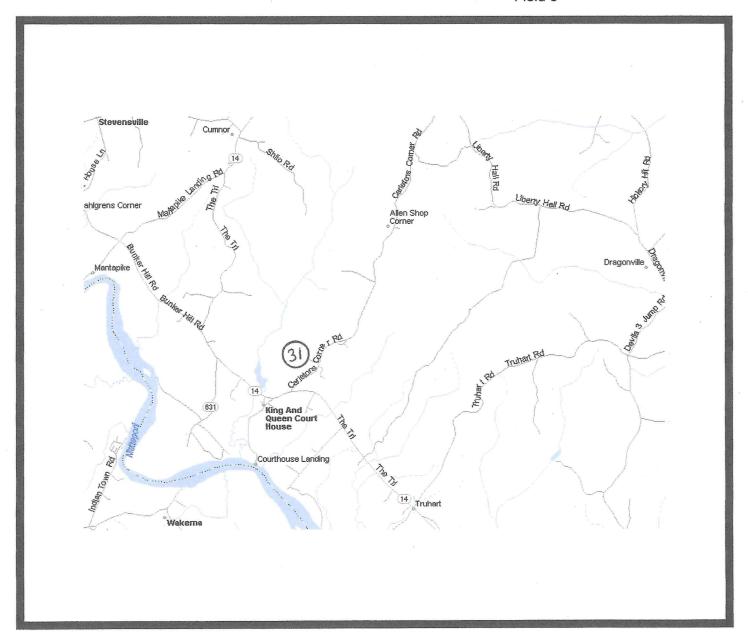


William Davis Carlton KQ31 Fields 2, 7



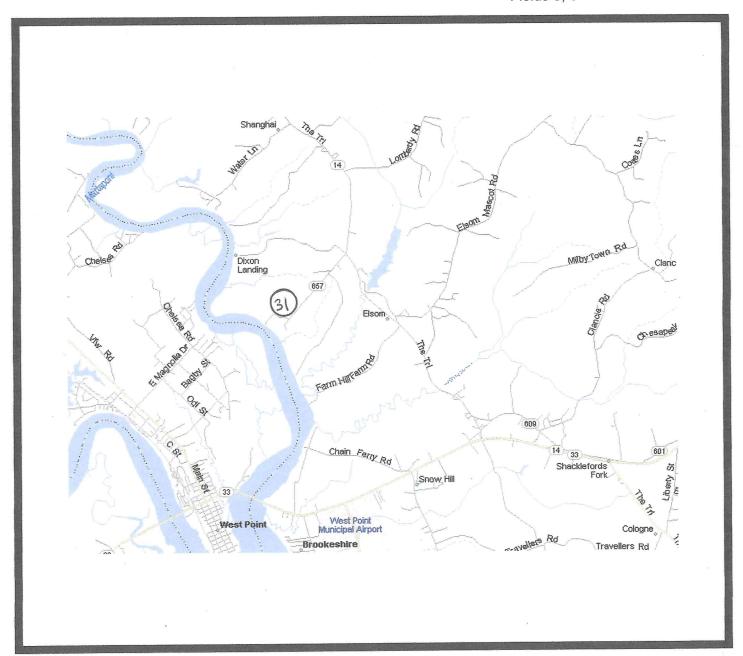


William Davis Carlton KQ31 Field 3





William Davis Carlton KQ31 Fields 5, 6





William Davis Carlton KQ31 Field 8

